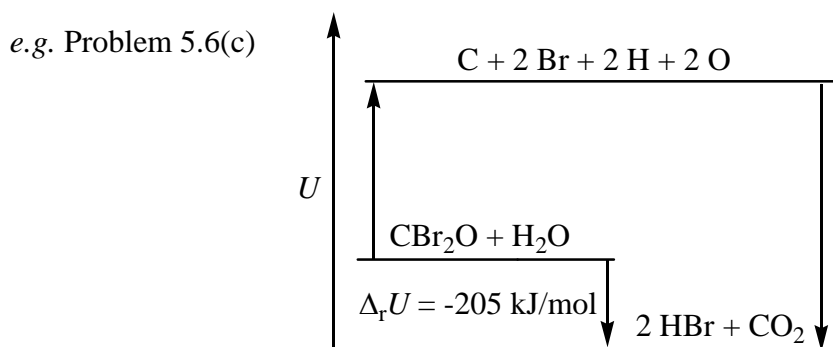


**Accelerated General Chemistry**  
**Problem Set 9**  
**Wednesday, December 2, 2009 (at 4:00 p.m.)**  
Total Points on This Assignment = 70

1. (4 points) Problem 5.6 parts (a) and (b). When Hanson says, “No need to do any calculations; just focus on relative ground states,” he means that the following diagram will suffice:



2. (4 points) Problem 5.9
3. (6 points) Problem 5.11. Briefly justify your answers.
4. (16 points) Problem 5.18. You must draw Lewis structures for all reactants and products.
5. (17 points) Problems 7.4 and 7.23. In 7.23, assume that no work is done to change the state of the system (neither from A to B, nor from B to C). Skip part (c) of 7.23. Also, any reasonable number of significant figures will receive full credit.
6. (9 points) Problem 7.6. Note that in all cases, you are comparing standard molar entropies at 298 K ( $S_{298}^\circ$ ). Also, please just give a brief justification for your answers based on energy levels.
7. (9 points) Problem 7.27
8. (5 points) Problem 8.1